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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,121	11/15/2000	William D. Nations	PA-Y0014	3359

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Joyce Kosinski
Patent Administrator
Loral Space and Communications
655 Deep Valley Drive Suite 303
Rolling Hills Estates, CA 90274

EXAMINER
GELIN, JEAN ALLAND

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 08/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/713,121	NATIONS ET AL.	
	Examiner	Art Unit	
	Jean A Gelin	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *25 April 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-8,10-25,27 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-8,10-25,27 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *25 April 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings and Claim Objections

1. In light of the Applicant's Amendment, the previously raised objections are hereby withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2, 4, 11-17, and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by YEE ET AL (US 6,151,497).

5. Regarding claim 1, YEE ET AL discloses a data transmission system comprising: a two-way communication link (36, 56, & 58 all-together) comprising at least one satellite (10); at least one user terminal (subscriber 50) having two-way communication with the two-way communication link, and comprising a cache (i.e., the memory) for selectively caching data broadcast by way of the satellite of the two-way communication link (col.3 lines 33-36); and at least one gateway (30) having access to data and having two-way communication with the two-way link (Fig.1, and col.3 lines 1-56).

6. Regarding claim 2, YEE ET AL discloses the system recited in claim 1; furthermore, the two-way communication link (i.e., for data request) comprises a low bandwidth two-way communication link (56) (col.3 lines 42-50).

7. Regarding claim 4, YEE ET AL discloses the system recited in claim 1, wherein the two-way communication link comprises a low bandwidth request link (56) and a high bandwidth data broadcast link (58) (col.3 lines 42-59).

8. Regarding claim 11, YEE ET AL discloses a method of communication data comprising the steps of: providing one or more orbiting satellites (10) that comprise a two-way communication link (36, 56, & 58 all-together); providing at least one user terminal (50) having two-way communication with the two-way communication link, and comprising a cache for selectively caching data broadcast by way of the satellite of the two-way communication link; providing at least one gateway (30) having access to data and having two-way communication with the two-way communication link; generating requests for data at the at least one user terminal; transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway; obtaining the requested data at the at least one

gateway; and transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link (Fig.1, and col.3 lines 1-56).

9. Regarding claims 12-16, YEE ET AL discloses the method recited in claim 11, wherein the step of transmitting the requests for data comprises transmitting the requests for data by way of a low bandwidth communication link, which is read to be satellite, terrestrial, and wireless, all three types, by virtue of routing that occurs between all system components (col.3 lines 42-61).

10. Regarding claim 17, YEE ET AL discloses the method recited in claim 11 wherein the step of transmitting the requested data comprises transmitting the data by way of a high bandwidth data broadcast link (col.3 lines 42-59).

11. Regarding claim 19, YEE ET AL discloses the method recited in claim 11. Furthermore, the gateway comprises a processor that keeps track of data requests in controlling communication, which reads on the step of obtaining the requested data at the at least one gateway using a user's request history to obtain the requested information (col.4 lines 19-22).

12. Regarding claims 20-22, YEE ET AL discloses the method recited in claim 11. Furthermore, the gateway is in communication with a billing function to generate data related to specific subscriber unit usage, which reads on the step of obtaining the requested data at the at least one gateway comprises using a user's user profile to obtain the requested information; also, billing information reads on related data transmitted along with requested data and stored at the gateway (col.3 line 65 – col.4 line 4).

13. Regarding claim 23, YEE ET AL discloses the method recited in claim 17. Furthermore, the gateway transmits data on a pre-scheduled basis, which reads on broadcasting the requested data at predetermined intervals, for whatever reason (col.4 lines 19-22).

Claim Rejections - 35 USC § 103

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claims 3, 5-8, 10, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over YEE ET AL.

16. Regarding claims 3 and 5-8, YEE ET AL discloses the system recited in claims 2 and 4, but fails to teach a particular communications frequency band. However, the Examiner takes Official Notice that the Ka-band and Ku-band are common in satellite communication, and further, well-known to involve spot beams to cover a selected area. It would have been obvious to one of ordinary skill in the art at the time of the invention for Yee et al to use the particular band appropriately, in order to timely implement the satellite system based on already existing technology and government policy in practice.

17. Regarding claim 10, YEE ET AL discloses the system recited in claim 1, wherein a cache is comprised in the user terminal, but fails to teach a cache similarly for comprised in the gateway. However, the reference also discloses the gateway having a memory, keeping track of data information requests and transmissions, and controlling communication with the subscriber unit when heavy traffic build up occurs; in the event of heavy traffic, transmission queues are made in the satellite (col.4 lines 19-29). It would have been obvious to one of ordinary skill in the art at the time of the invention for the gateway, given its aforementioned functionality, further to comprise a transmission queue, that is, to use the gateway's own existing memory capacity also

as data cache, for the purpose of providing a design alternative or a critical back-up to the satellite's transmission queuing.

18. Regarding claim 24, YEE ET AL discloses the method recited in claim 23. Furthermore, the gateway keeps track of information being processed and pre-scheduled data transmissions, which reads on broadcasting some amount of information at predetermined intervals (col.4 lines 19-22); the subscriber unit may be on an aircraft (Fig.1, and col.3 lines 1-12). In the case of the instant application, a predetermined number of most-requested web pages are broadcasted; YEE ET AL fails to disclose data transmission involving web pages specifically. However, web pages are data communication by definition, moreover which may be transmitted to users via subscriber units in an aircraft. It would have been obvious to one of ordinary skill in the art at the time of the invention for web pages to be broadcasted to the user in the aircraft environment disclosed by YEE ET AL, and furthermore, for the gateway to keep track of the most-requested web pages, for the purpose of providing the specific data desired by users in the most efficient way possible, by determining transmission based on the essential (i.e., most desired) information.

19. Claims 25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over YEE ET AL in view of CUNNINGHAM ET AL (US 5,991,596).

20. Regarding claims 25 and 28, YEE ET AL discloses a data transmission system comprising: a satellite broadcast link (58) for transmitting requested data; at least one gateway (30) having access to data that communicates with the satellite broadcast link; and at least one user terminal (50) that communicates with the satellite broadcast link and that comprises a cache for caching the requested data broadcast by the satellite broadcast link (Fig.1, and col.3 lines 1-56).

21. YEE ET AL fails to disclose a terrestrial communication link for communicating requests for data, and any communication between such a link and the gateway or with the user terminal, additional to the above in re claim 25. However, CUNNINGHAM ET AL teaches a wireless request backhaul channel that is a terrestrial communication link for communicating data requests, used in a satellite information broadcast system (col.1 line 25 – col.2 line 48). It would have been obvious to one of ordinary skill in the art at the time of the invention for the backhaul channel as taught by CUNNINGHAM ET AL to be further included in the system of YEE ET AL, so that this terrestrial link may be independent of the high bandwidth broadcast link, lending itself to more efficient information processing when request may be transmitted in a more timely manner (given the separation of links). Nevertheless, it also would have been obvious to one of ordinary skill in the art at the time of the invention to use the same terrestrial link both for communicating the requests for data as well as for transmitting the requested data (when the satellite link is inoperable), since a backhaul channel as taught by CUNNINGHAM ET AL does provide an alternative, two-way communication link to users even when satellite coverage is precluded by inclement weather or other atmospheric impediments, representing an increase in the reliability of data delivery, in addition to facilitating the efficiency of requesting data.

22. Regarding claim 27, the same argument as in re claim 10 likewise applies hereto, in light of the teaching by YEE ET AL of the system of claim 25.

Prior Art of Record

23. The following is prior art made of record and not relied upon but considered pertinent to applicant's disclosure:

Leucat et al. (US 6,201,121) discloses high bandwidth data transmission, internet access for airborne passengers via a two-way satellite broadcasting system.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A Gelin whose telephone number is (703) 305-4847. The examiner can normally be reached on 9:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (703) 305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

J.Gelin
August 12, 2002
J.G

DWAYNE BOST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
8-12-02